AMENDMENTS TO THE CLAIMS:

Please amend claim 1 and add newly written claims 31 and 32 as follows.

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A photonic crystal fibre comprising:

a region of substantially uniform, lower refractive index;

said lower refractive index region substantially surrounded by cladding which includes non-coaxial regions of higher refractive index and which is substantially periodic, wherein the region of lower refractive index has a longest transverse dimension which is longer than a single, shortest, period of the cladding, ~~whereby~~wherein the region of lower refractive index has a longest transverse dimension which is sufficiently large to provide that light is substantially confined in the lower refractive index region by virtue of a photonic band gap of the cladding material and is guided along the fibre.

2. (original) A photonic crystal fibre, as claimed in claim 1, in which the region of lower refractive index comprises a gas or a vacuum.

3. (previously presented) A photonic crystal fibre, as claimed in claim 1, in which the substantially periodic cladding material has a triangular lattice structure.

4. (original) A photonic crystal fibre, as claimed in claim 3, in which the triangular lattice comprises air holes in a solid matrix.

5. (previously presented) A photonic crystal fibre, as claimed in claim 1, in which the regions of higher refractive index consist essentially of silica.

6. (previously presented) A photonic crystal fibre, as claimed in claim 4, in which the fraction of air in the cladding is at least 15% by volume based on the volume of the cladding.

7. (original) A photonic crystal fibre, as claimed in claim 6, in which the region of the lower refractive index comprises air.

8. (previously presented) A photonic crystal fibre, as claimed in claim 1 in which the region of lower refractive index is a low pressure region.

9. (previously presented) A photonic crystal fibre, as claimed in claim 1, in which the lower index region comprises a material having a non-linear optical response, whereby light may be generated by non-linear processes in the lower-index region.

10. (previously presented) A photonic crystal fibre comprising;

a region of substantially uniform, lower refractive index;

said lower refractive index region substantially surrounded by cladding which includes non-coaxial regions of higher refractive index and which is substantially periodic, wherein the region of lower refractive index is large enough to support at least one transverse mode and light is substantially confined in the lower refractive index region.

11. (original) A photonic crystal fibre as claimed in claim 10, which is a single-mode fibre.

12. (previously presented) An optical device, including photonic crystal fibre according to claim 1.

13. (original) An optical device, as claimed in claim 12, comprising a spectral filtering device.

14. (original) An optical device, as claimed in claim 12, comprising an optical amplifier.

15. (original) An optical device, as claimed in claim 12, comprising a laser.

16. (original) An optical device, as claimed in claim 12, comprising a sensor that is capable of sensing a property of the gas of which the region of lower refractive index is comprised.

17. (previously presented) A telecommunications system, including a photonic crystal fibre according to claim 1.

18. (previously presented) A telecommunications system, including an optical device according to claim 12.

19. (previously presented) A telecommunications network including a telecommunications system according to claim 17.

20. (original) A method of making a photonic crystal fibre, comprising the following steps:

(a) forming a stack of canes, the stack including at least one truncated cane which defines a cavity in the stack;

(b) drawing the stack into a fibre having an elongate cavity.

21. (cancelled)

22. (previously presented) A method, as claimed in claim 20, in which the cavity has a transverse dimension greater than the corresponding transverse dimension of any of the canes.

23. (original) A method, as claimed in claim 22, in which the cavity has a transverse dimension greater than the sum of the corresponding dimensions of any two of the canes.

24. (previously presented) A method, as claimed in claim 20, in which the stack of canes comprises canes which are capillaries.

25. (original) A method, as claimed in claim 24, in which the capillaries form a triangular array.

26. (previously presented) A method, as claimed in claim 24, in which the capillaries are filled with a material other than air.

27. (previously presented) A photonic crystal fibre made by a method as claimed in claim 20.

28. (cancelled)

29. (cancelled)

30. (previously presented) A method of transmitting light along a photonic crystal fibre, comprising the steps of:

(a) providing a light source adjacent an end of said fiber; and

(b) arranging for light from the light source to enter the fiber for transmission therethrough, the fiber being a fibre as claimed in claim 1.

31. (new) A photonic crystal fibre comprising: a region of substantially uniform, lower refractive index; said lower refractive index region substantially surrounded by cladding which includes non-coaxial regions of higher refractive index and which is substantially periodic, wherein said region of lower refractive index has a longest transverse dimension of at least 9 μm.

32. (new) In an optical assembly comprising a light source and a photonic crystal fibre, wherein the crystal fibre comprises a region of substantially uniform, lower refractive index; said lower refractive index region substantially surrounded by cladding which includes non-coaxial regions of higher refractive index and which is substantially periodic, the improvement comprising that said lower refractive index region has a

longest transverse dimension which is sufficiently long to provide that the light emitted from the light source is substantially confined in the lower refractive index region.